(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 29 December 2004 (29.12.2004)

PCT

(10) International Publication Number WO 2004/114095 A2

(51) International Patent Classification7:

G06F

(21) International Application Number:

PCT/US2004/019860

(22) International Filing Date:

18 June 2004 (18.06.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/480,097

20 June 2003 (20.06.2003) US

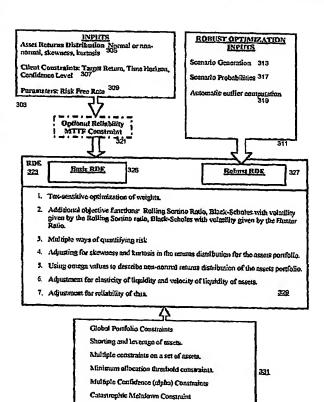
- (71) Applicant (for all designated States except US): STRATE-GIC CAPITAL NETWORK LLC [US/US]; 800 Boylston Street, 24th Floor, Boston, MA 02199 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): HUNTER, Brian, L. [US/US]; 359 Beacon Street, Boston, MA 02116 (US). KULKARNI, Ashish [US/US]; 100 Memorial

Drive, #11-1C, Cambridge, MA 02142 (US). **KACHANI, Soulaymane** [US/US]; S.W. Mudd Building, Room 334, New York, NY 10027 (US).

- (74) Agent: NELSON, Gordon, E.; 57 Central St., P.O. Box 782, Rowley, MA 01969 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: IMPROVED RESOURCE ALLOCATION TECHNIQUE



Uncertainty Cushion Constmint

(57) Abstract: Resource allocation techniques that include a technique for determining the probability that at least one asset in a set of assets will not achieve its desired return during a period of time. The technique is used to select reliable sets of assets for optimization. Also included are techniques for robust optimization of a set of assets. In these techniques, a user defines or selects scenarios that model investment conditions including normal and/or extreme conditions. The set of assets is optimized across the scenarios to produce weights for the assets in the set that optimize the worst-case value of the assets. A resource allocation system is disclosed which first selects a reliable set of assets for optimization using the selection technique described above and then optimizes the reliable set of assets. Optimization of the set of assets may involve robust or non-robust optimization, many different kinds of constraints and/or multiple constraints, different objective functions, and different adjustments for the objective functions. Selection of the set of assets and selection of the kind of optimization, of the constraints, of the objective function, and of the adjustments to the objective function is done using a graphical user interface.

WO 2004/114095 A2

- I MERIE BINGROOF HERRING HINN DERN BEWI DIER EN DER HERRI DERN BEWIN DERNE FOREN BING DER HEND WERE LEIGT DER

GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.